Supporting Information Available: Large-scale SEM image and HRTEM image of one secondary arm of the sample S3; large-scale SEM image of the sample S6; large-scale SEM, TEM images and FFT, inverse FFT patterns of the sample S12; SEM image of the sample S14; large-scale SEM image and partially amplified HRTEM image of the sample S17; XRD patterns of the products synthesized with the different molar ratio of cadmium nitrate and thiourea. This material is available free of charge via the Internet at http://pubs.acs.org.

Figure S1. (a) Large-scale SEM image of the sample S3; (b) HRTEM image of one secondary arm of the sample S3.

Figure S2. Large-scale SEM image of the sample S6.
Figure S3. (a) Low-magnification SEM image of the sample S12, the inset is the high-magnification SEM image of one hierarchical spindle; (b) HRTEM image collected from the juncture between the trunk and the branch, the insets show the corresponding SAED patterns; (c) fast fourier transform (FFT) pattern of the marked area in Figure S2b; (d) masked FFT pattern; (e) inverse FFT pattern of the marked area in Figure S2b, the black circles mark the typical dislocations.
Figure S4. SEM image of the sample S14.

Figure S5. (a) Large-scale SEM of the sample S17; (b) partially amplified HRTEM image of the sample S17.
Figure S6. XRD patterns of the products synthesized with the different molar ratio of cadmium nitrate to thiourea: (a) 1:0.5; (c) 1:8.